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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,732	06/25/2001	William A. Mittelstadt	56733USA5A.002	2092
32692	7590	10/01/2003		
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
			EXAMINER KOKABI, AZADEH	
			ART UNIT 3751	PAPER NUMBER

DATE MAILED: 10/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/888,732

Applicant(s)

MITTELSTADT ET AL.

Examiner

Azy Kokabi

Art Unit

3751

-- Th MAILING DATE of this communication appears on th cover sh t with the correspondenc address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) 2,4-6,12 and 22-33 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,7-11,13-21 and 34-42 is/are allowed.
- 6) ☒ Claim(s) 43-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 43-45, 47-52, 54-56 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Application No. 09/888,943 (Mittelstadt) in view of Dragerwerk (German patent # 1 213 249).

Application No. 09/888,943 discloses a unidirectional valve comprising a valve body, a frame, a valve opening, a generally planar valve seat, and a valve flap (see claim 1). The valve flap has a first portion attached to the frame and a second portion free to move from a first to a

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second position. The valve flap comprises a top surface, a bottom surface, and at least one support element extending from the top surface (see claim 5). The valve flap and seat provide a seal (see claim 10). Further, claim 9 claims that the valve flap is at least partially flattened when the valve flap contacts the valve seat. The valve is an exhalation valve and an inhalation valve (see figure 12 and 13). The facemask is formed of a filtering material (see claim 16). The valve flap is removably attached to the valve body (see claim 14).

Mittelstadt ('943) fails to specify that the valve flap thickness decreases when moving from the first end to the second end. Additionally, Mittelstadt ('943) fails to disclose the use of ribs on the valve flap.

Dragerwerk discloses a valve for respiratory facemask which, includes a valve flap thickness that varies between the first and second sides and further decreases when moving from the first end to the second end (See figure 6). Dragerwerk discloses ribs (#5) wherein at least one rib extends from the first end to the second end. Dragerwerk's valve contains ribs, which open only in a predetermined direction, and requires a certain force that is required to open the valve closing body (see page 2, last paragraph).

Therefore, In view of Dragerwerk, it would be obvious to one of ordinary skill in the art to provide for ribs in order to supply a flap that may be lifted with less resistance and greater ease for the user.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 43-45, 47-52, and 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Dragerwerk (Berman Patent #1 213 249).

Dragerwerk discloses face mask (see page 1) comprising a valve body (#1), a frame (see figure 7), a valve opening (see figure 6), and valve seat (see figure 6) that extends from the frame to at least partially surrounding the valve opening. In addition, Dragerwerk discloses a cantilevered valve flap (#19), which can be moved into two different positions. In the first position, its bottom or second portion contacts the seat and in the second position, the flap is spaced from the valve seat (see Figure 6 and 7). Further, Dragerwerk discloses a valve flap thickness that varies between the first and second sides (see figure 6) and a valve flap, including ribs (#4,5,6) whose thickness decreases when moving from the first end to the second end. The valve flap thickness, including the ribs, is greatest proximate the first position or the second position.

The valve flap has a top surface, a bottom surface, and at least one rib (#4,5,6) that extends from the top surface of the flap (see figure 6). The ribs provide the valve flap thickness variations between the first and second sides. Figure 6 also discloses the use of a plurality of ribs. A valve with ribs has a greater stiffness to mass ratio than a valve flap without ribs. The valve flap is curved and provides a seal between the flap and seat. The valve flap is at least

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partially flattened when the flap contacts the valve seat (see figure 7). The valve seat is generally planar.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 46 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dragerwerk.

As previously, discussed in paragraph 3 above, further Dragerwerk discloses all the limitations as set forth, however, Dragerwerk does not specify the maximum and minimum thickness between the first and second sides of the valve flap. Dragerwerk, however, does show a change in the size or thickness from sides of the flap, which provides for a valve that requires less resistance to move.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to specify a 10 percent greater thickness from the maximum and minimum

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sides of the flap, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (see MPEP 2144.05).

***Allowable Subject Matter***

2. Claims 1, 3, 7-11, 13-21, 34-42 are allowed.

***Conclusion***

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Azy Kokabi whose telephone number is (703) 306-4154. The examiner can normally be reached on Monday- Friday, 6:30am to 4:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (703) 308-2580. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

AK

A handwritten signature in black ink, appearing to read "Gregory Huson", written in a cursive style.

GREGORY HUSON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700